



Henderson County Engineering

Solid Waste Division

100 N. King Street, Suite 210
Hendersonville, North Carolina 28792
(828) 694-6521 | www.hendersoncountync.org



March 31, 2014

Ms. Jaclynne Drummond
Compliance Hydrogeologist
North Carolina Department of Environment and Natural Resources
Division of Waste Management – Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646
Phone: 1-919-707-8294

RE: Methane Monitoring results – first quarterly event of 2014
Closed Henderson County Landfill, Permit No. 45-01
Henderson County, North Carolina

Dear Jaclynne,

Attached are the results from the March 26, 2014, first quarterly methane monitoring event conducted at the Henderson County Closed Landfill in 2014. This is the fourth methane gas monitoring event taken place since the landfill gas collection and monitoring system was removed April 2013 by Enerdyne. Golder Associates on behalf of Henderson County submitted a Landfill Gas Remediation Plan – Phase 1 Plan on September 26, 2013, in which this office responded October 17, 2013 in a positive manner. In the Phase I plan, a portion of the plan was to vent landfill gas extraction wells within the area of the exceedances.

During this methane gas monitoring event, it appears that the vents are continuing to work, two of the wells (MP-5) and (TR-2) continue to reduce 22.7% and 7.9% respectively. However, (TR-3) has risen from 4.4% to 10.9% back outside of the boundary of the lower explosive limit (LEL). We will continue to vent this area and keep a close watch on this monitoring point during the next quarter. As you recall, when the system was removed in April 2013 the first reading we received for this monitoring point was 10.6% (September 2013). We will keep this office informed of this situation as time progresses. All other monitoring points remain below the lower explosive limits (LEL). As always during each methane gas monitoring event, when exceedances are indicated, Henderson County will continue to report them within 7 days to this office.

If you refer to the attachment “Boundary Probe Monitoring Log” three (TR-2), (TR-3) and (MP-5) had detections of methane noted above the lower explosive limit (LEL) during this event. No methane was detected in the facility structures during this compliance monitoring

ASSISTANT COUNTY ENGINEER OFFICE
HENDERSON COUNTY ENGINEERING - SOLID WASTE DIVISION
100 N. KING STREET, SUITE 210 • Phone: 828-694-6521

event.

Please allow this letter report to act as the 7-day notification of methane exceedances as required by the North Carolina Solid Waste Management Regulations. As you know the exceedances are likely due to the recent shutdown of the active landfill gas system that was operated at the landfill by Enerdyne until April 2013. If you have any questions or concerns, please contact us at (828)-694-6521.

Sincerely,



Natalie J. Berry, PE
Henderson County Engineering Department
Assistant County Engineer

Attachments: Boundary Gas Probe Monitoring Log – March 26, 2014
Methane Monitoring Location Map (provided by Golder Associates)
Environmental Monitoring Reporting Form

cc: Marcus A. Jones PE, Director of Henderson County Engineering
Greg Wiggins, Manager of Henderson County Solid Waste Operations
Rachel Kirkman PG, Associate and Senior Geologist - Golder Associates
David "Dusty" Y. Reedy II, PG, Senior Project Hydrogeologist – Golder Associates

March 31, 2014

DATE: 3/26/2014**BOUNDARY PROBE MONITORING LOG**Project Name: Henderson County LandfillDENR Permit Number: 45-01Site Contact: Greg Wiggins, Operations ManagerTechnician(s): Joe Roberts/Earl GillespieHigh Temperature: 39°Low Temperature: 35°Starting Barometric Pressure: 27.94End Barometric Pressure: 27.89Monitoring Equipment: Gem 2000 Plus

Monitoring Point	Time	% Methane (CH ₄)	% Carbon Dioxide (CO ₂)	% Oxygen (O ₂)	H ₂ S (ppm)	Comments
MP-1	1:10:00 PM	0.0	2.5	18.8	0.0	Located on the perimeter of the closed LF
MP-3	1:24:00 PM	0.0	0.3	20.4	0.0	Located on the perimeter of the closed LF
MP-4	1:50:00 PM	1.4	20.8	1.7	0.0	Located on the perimeter of the closed LF
MP-5	2:00:00 PM	22.7	16.7	11.9	0.0	Located on the perimeter of the closed LF
MP-6	2:35:00 PM	0.9	1.7	19.1	0.0	Located on the perimeter of the closed LF
LFG-101	3:32:00 PM	0.0	0.2	19.3	0.0	Located at the entrance rd to cc
LFG-102	3:35:00 PM	0.0	2.0	17.6	0.0	Located at the entrance rd to cc
LFG-103	3:40:00 PM	0.0	7.1	13.8	0.0	Located at the entrance rd to cc
TR-1	2:30:00 PM	0.0	1.1	20.0	0.0	Trace Property
TR-2	2:22:00 PM	7.9	18.5	7.7	0.0	Trace Property
TR-3	2:20:00 PM	10.9	29.3	3.0	0.0	Trace Property
Activity Building	3:25:00 PM	0.0	0.0	20.8	0.0	Structures
Animal Shelter	3:50:00 PM	0.0	0.1	21.3	0.0	Structures
Break House	3:27:00 PM	0.0	0.1	20.9	0.0	Structures
Bus Garage	3:20:00 PM	0.0	0.0	20.6	0.0	Structures
Convenience Center	2:45:00 PM	0.0	0.1	20.9	0.0	Structures
Maintenance Shop	3:55:00 PM	0.0	0.0	21.5	0.0	Structures
Scalehouse	4:05:00 PM	0.0	0.1	21.0	0.0	Structures
Trace Barn	2:26:00 PM	0.0	0.1	21.1	0.0	Structures

Completed by: Joe Roberts

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

- Instructions:
- Prepare one form for each individually monitored unit.
 - Please type or print legibly.
 - Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
 - Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
 - Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
 - Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Natalie J. Berry

Phone: 828-694-6521

E-mail: nberry@hendersoncountync.org

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Henderson County Closed Landfill	191 Transfer Station Drive, Hendersonville, NC 28791	45-01	.1600/.0500	March 26, 2014

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring
 ☐ Detection Monitoring
 ☐ Assessment Monitoring
 ☒ Corrective Action

Type of data submitted: (Check all that apply)

☐ Groundwater monitoring data from monitoring wells
 ☐ Methane gas monitoring data
 ☐ Groundwater monitoring data from private water supply wells
 ☐ Corrective action data (specify)
 ☐ Leachate monitoring data
 ☐ Other(specify)
 ☐ Surface water monitoring data

Notification attached?

☐ No. No groundwater or surface water standards were exceeded.
 ☐ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
 ☒ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Natalie J. Berry P.E.

Assistant County Engineer

828-694-6521

Facility Representative Name (Print)

Natalie J Berry PE

03/31/2014

(Area Code) Telephone Number

Signature

Date

100 N. King Street Suite 210 Hendersonville NC 28791

Facility Representative Address

Individual NC PE license Number 035614

NC PE Firm License Number (if applicable effective May 1, 2009)

Affix NC Licensed Professional Geologist Seal